

CLAIMS:

1. A method for secure establishment of a direct communication connection between at least a first communication terminal device and a second communication terminal device, the method comprising:
- 5 providing that the direct communication connection operate according to a first communication standard;
- providing a switched communication connection operating according to a radio communication standard between the first communication terminal device and the second communication terminal device; and
- 10 effecting an exchange of keys between the first and second communication terminal devices for encrypting data transferred over the direct communication connection, wherein the exchange of keys is at least partially performed via the switched communication connection.
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2. A method for secure establishment of a direct communication connection between at least a first communication terminal device and a second communication terminal device as claimed in claim 1, wherein the radio communication standard is a UMTS standard.
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3. A method for secure establishment of a direct communication connection between at least a first communication terminal device and a second communication terminal device as claimed in claim 1, further comprising transmitting a first message, as a request, from the second communication terminal device to the first communication terminal device, prior to the exchange of keys,
- 25 wherein the first message contains address information uniquely authenticating the second communication terminal device in a network configured according to the radio communication standard.
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4. A method for secure establishment of a direct communication connection between at least a first communication terminal device and a second communication terminal device as claimed in claim 3, further comprising:

transmitting a second message from the first communication terminal device to the second communication terminal device via the switched communication connection, wherein the second message contains a first key; and

5 transmitting a third message from the second communication terminal device to the first communication terminal device via one of the direct communication connection and the switched communication connection, wherein the third message contains a second key.

5. A method for secure establishment of a direct communication connection between at least a first communication terminal device and a second communication terminal device as claimed in claim 4, the method further comprising:

15 transmitting a randomly generated bit sequence, as part of the second message, from the first communication device to the second communication device via the switched communication connection;

encrypting the bit sequence with the first key in the second communication terminal device;

20 transmitting the encrypted bit sequence, as part of the third message, from the second communication terminal device to the first communication terminal device via one of the direct communication connection and the switched communication connection;

comparing the bit sequence of the second message with the encrypted bit sequence of the third message in the first communication terminal device; and

25 effecting a data exchange between the first communication terminal device and the second communication terminal device, if the bit sequence of the second message matches the encrypted bit sequence of the third message, via the direct communication connection, wherein data originating from the first communication terminal device is encrypted with the second key and data originating from the second communication device is encrypted with the first key.

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6. A method for secure establishment of a direct communication connection between at least a first communication terminal device and a second communication terminal device as claimed in claim 4, wherein the transmission of at least one of the second message and the third message operates according to a standard for short messages transmitted via radio.

7. A method for secure establishment of a direct communication connection between at least a first communication terminal device and a second communication terminal device as claimed in claim 5, wherein the transmission of at least one of the second message and the third message operates according to a standard for short messages transmitted via radio.

8. A method for secure establishment of a direct communication connection between at least a first communication terminal device and a second communication terminal device as claimed in claim 4, wherein the transmission of at least one of the second message and the third message operates according to a standard for transmitting packet data.

9. A method for secure establishment of a direct communication connection between at least a first communication terminal device and a second communication terminal device as claimed in claim 5, wherein the transmission of at least one of the second message and the third message operates according to a standard for transmitting packet data.

10. A communication terminal device for secure establishment of a direct communication connection with a further communication terminal device, the direct communication connection operating according to a first communication standard, comprising:

parts for effecting an exchange of keys between the communication terminal device and the further communication terminal device for encrypting data transferred over the direct communication connection; and

parts for ensuring that the exchange of keys is at least partially performed via a switched communication connection operating according to a radio communication standard.

5 11. A communication terminal device as claimed in claim 10, wherein the radio communication standard is a UMTS standard.

10 12. A communication terminal device as claimed in claim 10, further comprising parts for receiving a first message, as a request, transmitted by the further communication terminal device, the first message containing address information uniquely authenticating the second communication terminal device in a network configured according to the radio communication standard, and wherein the exchange of keys is performed following reception of the first message.

15 13. A communication terminal device as claimed in claim 12, further comprising:
 parts for transmitting a second message containing a first key to the further communication terminal device via the switched communication connection; and
 parts for receiving a third message containing a second key transmitted by
20 the further communication terminal device via one of the direct communication connection and the switched communication connection.

 14. A communication terminal device as claimed in claim 13, further comprising:
25 parts for transmitting a randomly generated bit sequence, as part of the second message, to the further communication terminal device via the switched communication connection;
 parts for receiving a bit sequence, as part of the third message encrypted with the first key in the further communication terminal device, transmitted by the
30 further communication terminal device via one of the direct communication connection and the switched communication connection;

parts for comparing the bit sequence of the second message with the encrypted bit sequence of the third message; and

5 parts for effecting a data exchange, if the bit sequence of the second message matches the encrypted bit sequence of the third message, between the communication terminal device and the further communication terminal device via the direct communication connection, wherein data originating from the communication terminal device is encrypted with the second key and data originating from the further communication terminal device is encrypted with the first key.

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15. A communication terminal device as claimed in claim 13, wherein the transmission of at least one of the second message and the third message operates according to a standard for short messages transmitted via radio.

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16. A communication terminal device as claimed in claim 14, wherein the transmission of at least one of the second message and the third message operates according to a standard for short messages transmitted via radio.

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17. A communication terminal device as claimed in claim 13, wherein the transmission of at least one of the second message and the third message operates according to a standard for transmitting packet data.

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18. A communication terminal device as claimed in claim 14, wherein the transmission of at least one of the second message and the third message operates according to a standard for transmitting packet data.